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DEPARTMENT OF TRANSPORTATION**

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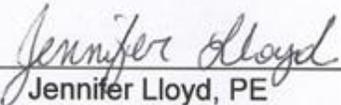
BILL HASLAM
GOVERNOR

INSTRUCTIONAL BULLETIN NO. 14-25

Regarding Resurfacing Projects

Effective immediately, sections 1-200.11, 1-200.12, 1-200.15, 1-200.17, Figure 1-6 and Figure 1-6A, Figure 1-6B, and Figure 1-6C are revised/ added as attached. Resurfacing projects initiated prior to this instructional bulletin may continue to use the previous checklist.

PURPOSE: This Instructional Bulletin is intended to revise the procedures for planning and designing resurfacing projects.



Jennifer Lloyd, PE
Civil Engineering Director
Roadway Design Division

JL:ARH
12/01/2014

Attached:

1-200.11 RESURFACING PLANS SCOPE OF WORK CERTIFICATION

A certification memo (See Figure 1-6) will be submitted in lieu of plans to the Environmental Division for resurfacing projects limited to paving and/or installation of safety related items. The Design Manager shall request the memo from the Regional Resurfacing Coordinator at the beginning of the project development and review and sign the memo prior to forwarding it to Environmental Division.

This section **does not apply** to projects involving work on drainage or grading. Projects involving grading, drainage or otherwise expanded scopes of work will follow the normal plans submittal process to Environmental Division.

In the event a scope of work is modified during plans development, it will be the responsibility of the Design Manager to submit an addendum memo (See Figure 1-6A) to the Regional Resurfacing Coordinator for certification and then submit the memo to the Environmental Division.

1-200.12 PEDESTRIAN ACCESSIBILITY (ADA) AND BICYCLE ACCOMMODATION DURING RESURFACING PROJECTS

In order to assist local governments with compliance with the Americans with Disabilities Act, it will now be the department's intent to repair or install handicap ramps which meet the Americans with Disabilities Act (ADA) Accessibility Guidelines whenever possible when encountered on resurfacing projects. Designers should refer to Section 3-310.05 and the RP-H-series Standard drawings for additional guidance regarding design requirements and installation of handicap ramps. Additionally, improvements for pedestrian safety and improvements for safety of the disabled shall be evaluated (continuity of the facility should be considered ie. Include entire intersection if part is improved). Coordinate with the ADA Coordinator and the Bike/Pedestrian Coordinator for additional guidance and recommendations.

Current and future bicycle accommodations for the route should be identified. Coordinate with TDOT Bike/Pedestrian Coordinator for further guidance if bike lane or bike route is proposed. On designated bike routes or other state routes if bicycle traffic is common route and when practical within the scope and budget of the resurfacing project, accommodation for bicycle traffic should be included. Accommodations may include striping a bike lane, widened shoulders or adding signing and striping. Coordinate with the Bike/Pedestrian Coordinator for recommendations.

The applicable use of the above various bicycle/pedestrian improvements will be guided by the "Resurfacing Pedestrian Accessibility and Bicycle Accommodation Checklist" (Figure 1-6B) and will be completed by the team responsible for each resurfacing project. This checklist will be used as documentation for decisions regarding bicycle/pedestrian and ADA low cost safety improvements on resurfacing projects.

1-200.15 SAFETY IMPROVEMENTS ON RESURFACING PROJECTS

To enhance safety on state routes, low cost safety improvements should be included on all state route resurfacing projects. Eligible safety improvements include the following: installation of skid-resistant surfaces in intersections or curves, evaluation of

guardrail length of need and adjustment of guardrail length as necessary; upgrade of guardrail end terminals to TL-3; installation of centerline rumble stripes; sign replacement or upgrades; replacement of non-frangible sign posts with breakaway posts; installation of safety headwalls, removal of roadside objects inside the clear zone if it can be accomplished without additional grading or right-of-way purchase; correcting super elevation rates; improvements (such as vegetation removal) to improve sight distance without purchasing ROW or relocating utilities; and widening shoulders without purchasing ROW or relocating utilities.

The applicable use of the above various safety improvements will be guided by the “Resurfacing Safety Checklist” (Figure 1-6C) and will be completed by the team responsible for each resurfacing project. This checklist will be used as documentation for decisions regarding low cost safety improvements on resurfacing projects.

Installation of shoulder rumble strips or stripes, and raised pavement markers (RPM) are also considered low cost safety improvements. These are to be installed per the current pavement marking policy in section 4-716.05. All low cost safety improvements including rumble stripes/strips and RPMs may be paid for under safety project funding should the project meet the safety upgrade threshold.

Items for low cost safety improvements shall be funded separately from other resurfacing plan items in both federally funded and 100% state funded resurfacing projects if the total estimated costs of the safety upgrades are greater than \$10,000. Therefore, designers should have an additional project number set up for payment of safety improvement items.

Designers will be responsible for obtaining the additional federal project number by advising the Programming Development and Scheduling Office the additional project number is needed for the inclusion of safety improvements in the resurfacing project and correctly identifying items by funding source in the resurfacing plans. If the project meets the threshold for separate safety funding, the designer shall submit the resurfacing plans and Resurfacing Safety Checklist to the Regional Safety Coordinator.

If the total estimated costs of the safety improvements are less than or equal to \$10,000, a separate project number will not be required. Safety improvements shall be funded using the same project number and resurfacing funds used for other items in the project.

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1-200.17 PLANS FOR RESURFACING PROJECTS

Resurfacing projects that do not include grading or drainage work, only require a title sheet, typical section showing proposed pavement schedule, estimate and notes sheets. An Engineer's stamp and signature is required.

If safety improvements are to be completed under a separate project number, then the designer shall add the following special note to the plans:

ALL SAFETY IMPROVEMENTS TO BE PAID FOR UNDER PROJECT NUMBER:

_____.

Work Zone Safety

- ___ Significant Project Determination
- ___ Temporary Traffic Control
- ___ Detour
- ___ Other: _____
- ___ Other: _____

I certify that the scope of the subject resurfacing and safety project is limited to the items listed above.

Regional Resurfacing Coordinator

Date

Civil Engineering Manager 1

Date

In the event that additional items are added to the scope of work during plans development, complete the section below and resubmit to the Environmental Office.

ADDENDUM TO SCOPE OF WORK FOR RESURFACING PLANS

The following has been added to the original scope of work for the subject resurfacing project:

Regional Resurfacing Coordinator

Date

Civil Engineering Manager 1

Date

**Figure 1-6
Resurfacing Scope of Work Certification Memo**



PEDESTRIAN ACCESSIBILITY & BICYCLE ACCOMMODATION CHECKLIST

County	Route	PIN	Begin Log Mile	End Log Mile

Curb Ramps and Crosswalks

All sidewalks at intersections inside the resurfacing project shall have ADA compliant ramps, (*refer to RP-H-series drawings*) and marked crosswalks (*refer to the standard drawing T-M-4*) *Coordinate with both the ADA Coordinator and the Bicycle/Pedestrian Coordinator for recommendations.*

Pedestrian Facility Intersections			
Intersection/Crossing Roadway*	Number of Ramps to Built	Type of Ramp	Number of Crosswalks

*Add a sketch to clarify the type and location of the proposed ramps on side roads or intersections in order to maintain continuity/accessibility.

Bike Route/ Bike Lanes

1. Is the Highway designated as a bike route or a bike lane in accordance with the Long Range Multimodal Transportation Plan per *the Bicycle/Pedestrian Coordinator*?

Bike route

Refer to the standard drawing T-M- 11 for bike route signing and pavement markings.

Bike Lane

Evaluate the existing roadway lane and shoulder widths and refer to the standard drawings T-M-12 thru 14 for bike lane signing and pavement markings.

2. Indicate location(s) where the proposed bike lane may be interrupted due to the narrowed shoulders such as bridge crossings or intersections.

Interrupted Bike Lane Locations		
Begin Log Mile	End Log Mile	Left / Right

**Figure 1-6B
Pedestrian Accessibility and Bicycle Accommodation Checklist**



RESURFACING SAFETY REVIEW CHECKLIST

County	Route	PIN	Begin Log Mile	End Log Mile	AADT	Design Speed

Crash History

Contact the Project Safety Office and/or Regional Traffic Engineering Office to obtain the below information.

Years Reviewed	Total Crashes	Fatal Crashes	Injury Crashes
VMT	Crashes/VMT	Fatal Crashes/VMT	Injury Crashes/VMT

Shoulders

- Is the paved shoulder width greater than 2 feet?
Yes No (If no, continue on next question)
- Is there a history of roadway departure crashes based on crash history?
Yes No (If yes, continue on next question)
- Can shoulder be widened to 2 feet with minimal grading and no right-of-way acquisition or utility relocations?
Yes No (If yes, indicate location(s) of min. 2 ft. shoulder widening in table)

Locations to Widen Shoulder to 2 Feet		
Begin Log Mile	End Log Mile	Left / Right

Horizontal Curves

Indicate in the below table any curves that pose a safety issue based on crash history or that are substandard geometrically. *Refer to RD01-TS series Standard Drawings*

Horizontal Curves of Concern			
	Can Superelevation be corrected with paving? Yes <input type="checkbox"/> No <input type="checkbox"/>	Candidate Location for High Friction Surface Treatment? Yes <input type="checkbox"/> No <input type="checkbox"/>	Delineate Curve with Chevrons and Advanced Warning Signs Yes <input type="checkbox"/> No <input type="checkbox"/>
Log Mile of PC			

Safety Edge Paving

- Will resurfacing result in an edge drop off exceeding 1.75 inches?
Yes No (If yes, continue on next question)
- Specify safety edge paving and include paving general note 3 (See Section 6-150.01 of the Roadway Design Guidelines)
Refer to section 4-416.00 in the Roadway Design Guidelines.

**Figure 1-6C
Resurfacing Safety Checklist (1 of 4)**

Centerline Rumble Stripe

For projects with undivided two way traffic only, indicate in the below table any location (or entire project length) in which there is a crash history of crossover crashes in which the addition of centerline rumble stripe may improve safety. *See standard drawing T-M-16A for details*

Centerline Rumble Stripe Locations	
Begin Log Mile	End Log Mile

Signing

Indicate in the table below any existing signs needing to be replaced or adjusted due to visibility, damage, height, vegetation, placement, breakaway/bend-away post etc.

Refer to T-S series Standard Drawings

Signs Needing Attention			
Log Mile	Left / Right	Sign Type	Replace/Adjust

Sight Distance

Indicate in the below table any locations where stopping sight distance or intersection sight distance is not adequate. *Refer to RD01-SD-series drawings*

Stopping Sight Distance and Intersection Sight Distance		
Log Mile / Cross Road	Remove Vegetation	Advanced Warning Signs
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

Guardrail, Guardrail End terminals & Attenuators

Existing Guardrail at Bridge Ends

Replace any guardrail at bridge ends transitions that are inadequate.

Refer to Standard Drawings S-GRC-1 or S-GRC-2

Guardrail End Terminals to be Replaced		
Log Mile	Left / Right	Type 12 / Type 38

Existing Guardrail End Terminals

Replace any existing guardrail end terminal on National Highway System not meeting TL-3 NCHRP 350 or MASH requirements with TDOT Type 12 (Buried in Backslope) or Type 38 (Tangential Energy Absorbing).

Refer to Standard Drawings S-GRT-1 or S-GRT-2, and section 4-705.00

Guardrail End Terminals to be Replaced		
Log Mile	Left / Right	Type 12 / Type 38

Figure 1-6C
Resurfacing Safety Checklist (2 of 4)

Guardrail, Guardrail End terminals & Attenuators (Continued)

Existing Guardrail Height Adjustments

Any existing guardrail that will be less than 27" in height (measured from the shoulder extended) after resurfacing shall be raised to between 28" to 29" inch height.

Guardrail Locations to be Adjusted		
Begin Log Mile	End Log Mile	Left / Right

Proposed Guardrail

Indicate any additional locations that warrants new guardrail or existing locations where the guardrail height cannot be adjusted due to limitations such as post length or steep fill slope (requires longer post).

Refer to Sections 4-705.10 through 4-705.15

Locations Guardrail Locations to be Installed		
Begin Log Mile	End Log Mile	Left / Right

Attenuator

Indicate any location that warrants the new installation, replacement or upgrade to low maintenance category of an attenuator.

Locations Attenuator to be Installed		
Begin Log Mile	End Log Mile	Left / Right / Median

Roadside Obstacles

Indicate any roadside obstacles inside the clear zone that can be removed, relocated or delineated without purchasing additional right-of-way. *Refer to sections 4-705.13 and 4-705.15*

Roadside Obstacles to be Mitigated			
Log Mile	Left / Right	Hazard	Remove / Relocate / Delineate

Drainage Improvements

Indicate any roadside ditch that could be reshaped or otherwise improved without relocation of utilities or purchase of right-of-way. *Refer to Chapter 5 of the Drainage Manual*

Ditches to be Improved			
Begin Log Mile	End Log Mile	Left / Right	Description of Improvement

**Figure 1-6C
Resurfacing Safety Checklist (3 of 4)**

Pipe Culvert Head walls

Indicate any pipe culvert within the clear zone without proper safety headwalls.

Refer to Section 6.04.3 of the Drainage Manual and D-PE-series Standard Drawings

Log Mile	Offset, Left / Right	Pipe Diameter

Railroads

Is there a railroad crossing within the project limit or within 200' of the project limits either on the mainline or on side roads?

Yes No (If no, skip to next section)

Coordinate with TDOT Railroad Coordinator at Headquarters for recommendation on the adequacy of warning systems.

Railroad Crossings		
Begin Log Mile	End Log Mile	Left / Right

Is the total estimated costs of the safety upgrades are greater than \$10,000?

Yes No

If yes, proposed safety improvements shall be funded separately from other resurfacing plan items in both federally funded and 100% state funded resurfacing projects. Therefore, designers should have an additional project number set up for payment of safety improvement items.

**Figure 1-6C
Resurfacing Safety Checklist (4 of 4)**